

## **Cozumel Investigation Center for Billfish Conservation**

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*Mexican Billfish Conservation Center*

### **PRESENTATION**

The Research Center for the Conservation of Billfish is a project conceived as a concerted effort between the Ministry of Education (SEP) and the Mexican Maritime Confederation, A.C. (CMM). The central purpose of this project is to achieve common objectives and goals concerning educational development in areas of maximum interest. These objectives include the promotion of training programs, the support of professional practices for graduates of the Centers of Technological Studies of the Ocean (CETMAR), as well as the conservation and improvement of the marine environment and the species reserved for sport fishing. It is a uniquely planned program, and it is also the first in the world to unite the concepts of sport fishing, practical education of specialized personnel, and scientific research of the resource.

In order to give solemnity and legal expression to the commitments undertaken, an agreement of mutual cooperation and technical assistance was made in 1986 between CMM and SEP. Clauses of great interest are the fifth, seventh, eighth, and tenth. The fifth clause establishes the joint promotion of agreed upon projects and the joint collection of resources and instrumental means of execution. In the latter case, public or private funds may be utilized. The seventh clause establishes that in order to support sport fishing and aquatic recreation, the SEP should incorporate teaching personnel and students in the projects and programs. The eighth clause commits the CMM to the encouragement of research programs and the administration of the SEP related to sport fishing and aquatic recreation. Further, the CMM will promote programs of training in these areas as well as support the execution of professional practices and social service of CETMAR graduates. Finally, CMM will create a labor pool, give scholarships to students, give access to students and graduates in promotional and scientific disclosure events, and facilitate installations and equipment for the development of projects and programs related to sport and recreational areas. Generally, the eighth clause describes the educational responsibilities assumed by the CMM, and it also leaves open the possibility of private collaboration. The tenth clause forms the identification phase, analysis process, expression and cooperation modes, as well as the structure and objectives of the projects and programs. Further, this same clause proposes methods of financing and recuperation.

## BACKGROUND

The Mexican foundation for the conservation of billfish, C.A. (Mexican Billfish Foundation), constitutes a response by the private sector (united in the Mexican Maritime Confederation) to explore the processes causing the decline observed in the supply of billfish. This resource is considered to be a national and world legacy.

For a long time the large fishing fleets of the world have carried out an overexploitation of marlin, sailfish, and sword fish (commonly known as billfish) in the center of the Mexican Exclusive Economic Zone. This problem has worsened since the creation of a commercial billfishing fleets, some of which are as large as 21 trawling vessels. These vessels operate in the northwest zone of the Mexican Pacific coastline, across from the region of Los Cabos. The capacity of these fleets is aimed at increasing to 6,250,000 fishhooks per year. Such an increase will cause serious damage to the already decreasing availability of billfish. This situation seriously affects sport fishing, which significantly augments the tourist industry of the coastal regions on the Pacific Ocean. Similar situations are already observed in the Mexican Caribbean and Gulf.

Faced with this problem, it becomes necessary to establish a clear goal. The goal of The Mexican Foundation for the Conservation of Billfish is to instigate programs designed to protect and restore the billfish species. This objective will be achieved by conducting scientific research that relates to the billfish and their plight. The pertinent conclusions will then be used to educate and train the leaders of those tourist services related to sport fishing on how to best protect and restore the billfish stocks. In this way, the Foundation will hopefully conserve this valuable resource.

The support structure of the Foundation is made up of the co-patronage of the Mexican Maritime Confederation, its Coordinating Boards, and the Mexican Institute of Sport Fishing, C. A. However, it may also be possible to receive support from the following official entities; institutions, universities, other institutions of higher learning, centers of research and investigation, foundations, national and foreign private organizations, as well as others who are interested in this project.

As an important advance of the Mexican Foundation for the Conservation of Billfish, C.A., an initial investment is being made that will ultimately total 400 million pesos (250 thousand dollars, at the exchange rate of 1.600 pesos per dollar). This important funding will be used to establish a Pilot Research Center on the island of Cozumel. As of October, 1987, the project already has a completed building as well as some other important functional elements; however, the installations have yet to be supplied with materials, equipment, and working capital. Expenses and organizational costs have also yet to be

determined. The Center is presently in its pre-opening stage and should be open for research, teaching, and professional practice programs by January, 1988.

## OBJECTIVES

### Considerations

The aquatic-recreational tourist activity generated in our country by the billfish species (blue, white, striped and black marlin, sailfish, swordfish and needlefish) makes necessary the development of research on and knowledge about these endangered species. Since there is an absence of institutions specializing in this field and in the area of training of personnel for the activities related to billfish (*e.g.*, recreational deep sea fishing, the administration of marinas and sport fishing fleets, as well as port and navigation services), our groups should give singular importance to the creation of this Center. This objective will be achieved through the professional practices of the graduates of CETMAR who expand their knowledge by research, study, and training. They can then become instruments of development for the regional economy generating a specialized human resource. This new human resource will hopefully become equipped with a social philosophy that will promote the conservation and rational utilization of the billfish and other species, which have been reserved for sport fishing by Mexican laws.

The specialized training of the young Mexican graduates from technical schools related to ocean studies will allow the foundation to give highly qualified personnel to the leaders of tourist services, owners of sporting vessels and to vessels of the social and private sectors. Therefore, in order to obtain significant results from the research, the Center's objectives should maintain this narrow focus. Only through the application of such well focused objectives can the specific pressures affecting the billfish be adequately known.

At the foundation of the Center of Research for the Conservation of Billfish is the firm belief in research and scientific knowledge and not in that of popular opinion or political whims. If we are to avoid excessive exploitation and destruction of this resource, then this idea should be the basis for planning and administration.

With this principle in mind, the Center should have at its core the know-how, advice, and planning expertise of eminent and studious scientists. Their capacity and interest will be directed toward the seven species of billfish, and key points of interest for them will be understanding these species' vital cycles and environments. Additionally, these scientists will have the task of understanding the fisherman's questions and providing them with coherent and useful responses.

Although the Mexican Foundation of Conservation of Billfish and its research center will endeavour an apolitical posture, these institutions' investigations will probably produce results and conclusions of significant

importance for other groups whose objectives include influencing political policies. Therefore, as previously mentioned, the Center of Research for the Conservation of Billfish commits itself to fully share the results of its studies and investigations with affiliated institutions that can more effectively facilitate the conservation of supplies of billfish.

### **Philosophy**

The philosophy of the Center of Research for the Conservation of Billfish is based on the fundamental belief that the study, research, and understanding of these species and the activities of their lifecycle will permit conservation and rational use of this resource. In this context, the Center of Research for the Conservation of Billfish will share the results of its work with private and official institutions which have direct or indirect influence over those individuals and organizations that may assist in the rational conservation and utilization of the resource.

This Center is a nonprofit educational and research organization, and its basic goal is the conservation and improvement of the supply of billfish and other species reserved for sport fishing in our country. These objectives are to be accomplished by means of scientific research for the benefit of sport fishermen and leaders of tourist services. The Center is committed exclusively and interested in the seven species of billfish.

The four marlin varieties (white, striped, black and blue), the swordfish, sailfish, and needlefish represent for fishermen a distinct and separate class of fish, possessing a peculiar mysticism. These fish are often sought after with much conviction, and from this conviction is born the determination to use an equally specialized focus to preserve the fishing grounds.

### **Principal Objectives**

1. To back up, direct, and facilitate the research and study of the billfish populations in our country.
2. To develop and maintain a reference library on the billfish, including sport fishing of these species.
3. To compile and disseminate information on billfish to its members, conservationist groups, and the general public.
4. To develop and support programs aimed at assisting in the rational conservation and use of billfish.
5. To lend assistance to institutions devoted to the research and study of billfish.
6. To work in close cooperation with affiliated organizations whose object is to influence political activity and administration of fishing grounds for the particular benefit of billfish.

7. To promote agreements of concerted action with universities, research centers, and national or foreign institutes which propitiate joint programs of research and conservation under the commitment of shared effort and application of matching funds.

**Specific Objectives**

1. To have in our country a center specializing in research, expertise , and development of the billfish resource.
2. To train a group selected for its aptitudes, behavior, and utilization of students graduated from the special course in recreational fishing techniques, from the Centers of Technological Studies of the Ocean of:
  - La Paz, Baja California Sur.
  - La Cruz de Huanacastle, Nayarit.
  - Acapulco, Guerrero.
  - Chetumal, Quintana Roo.
  - private organizations, associations or institutions which may request and justify it.

**Institutional Objectives**

1. To autofinance the Center, with funds generated through its own activities.
2. To have its own installations for care and development of the research programs being carried out on the isle of Cozumel, Quintana Roo.
3. To periodically and permanently generate qualified personnel specializing in study, investigation, and conservation of the billfish species .
4. To promote research of the marine flora and fauna and the conservation of their environment.

**Goals**

The goals are to annually generate a minimum of 25 graduates specializing in research, study, conservation, and complementary activities related to billfish. These specialist will be utilized by people devoted to recreational fishing. These groups include; the leaders of tourist services, proprietors of sport vessels, vessels from the social and private sectors, as well as the operators of sporting ports or marinas

**INSTALLATIONS, WORKING CAPITAL AND HUMAN RESOURCES**

**Building**

1. Installations:
  - 2 classrooms
  - 1 dormitory area

- 1 locker and changing room area
  - 1 library area (study and reading hall)
  - 1 office area
  - 1 kitchen/dining area
  - Bathroom and shower area
  - 1 thatched-roof hut and sports field
  - Laboratory
2. Materials and equipment for living space, feeding and cleaning.
  3. Office and administration equipment:
  4. Support materials/equipment
    - fishing gear
    - diving equipment
    - 2 whale type launches for the production program:
    - communication/radio-assist equipment:
    - navigation equipment
    - laboratory equipment:

#### **Basic Aquaculture Unit**

It will consist of a natural dam with water interchange by inflow and outflow of tides by means of an adjacent marina that is equipped with experimental habitats for reef-dwelling fauna.

#### **Experimental Unit of Fish-breeding Habitats**

200 FADs are provided by McIntosh Marine Inc. of Fort Lauderdale, Fla. (it consists of scattered installation in a submarine area 30 m deep , 5000 m<sup>2</sup>, and 300 m in front of the estuary of the sporting port of the Nautical Club of Cozumel).

1. 20 packages of cement
2. 5 m<sup>3</sup> of sand for construction
3. 5 rolls of polypropylene thread 1/4" diameter
4. 50 habitats for minor species, crustaceans and mollusks

#### **Working Capital**

The Center will have an initial working capital consisting of a revolving fund and a operating chest the amount of which will be calculated by the Government Board and approved by the trust made up of the Board of Directors. This capital will guarantee the operation of the Center in its pre-opening stages. The working fund will be reestablished by means of a weekly inflow, the timeliness and operativity of which will be the responsibility of the Government Board. This fund will be retrofed by the operating chest which will initially be funded through a donation from the Mexican Foundation for the Conservation of Billfish, C.A., and the Mexican Maritime Confederation. The initial amount will

## **Gulf and Caribbean Fisheries Institute**

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total \$16,000,000.00 Mex. Cy. (10 thousand dollars). The Government Board will also be responsible for increasing said working capital and making the operation of the fund self-financing.

### **Human Resources**

1. Operation and administration:
  - promotion
  - public relations
  - feeding and provisioning
  - commercialization and services to third parties
  - superintendence
  - secretaryship
  - surveys and economic research
2. Maintenance of building and work equipment:
  - installations and vessels
  - supervision of the aquaculture unit
  - supervision of the fish-breeding habitats
3. Follow up and development of the research programs:
  - catching and processing specimens
  - sampling and ordering data

### **Technical, Scientific and Teaching Advice**

The Foundation, the Trust, and the Government Board will encourage visits to the Center of by the following:

1. Qualified speakers in the organizations and institutions, national and international, with which the Trust has relations.
2. Sport fishing instructors from national and foreign fleets based at the sporting port Banco Playa and from the D.G. C.T.M. (SEP).
3. Representatives of the Mexican Institute of Sport Fishing of the National Institute of Fishing, responsible for the programs of marking, freeing and production.
4. Instructors in administration and maintenance of social and private sport fishing fleets .
5. Instructors in recreational, scientific and commercial diving, sent by the lenders of services, local diving stores, institutions of oceanic engineering, universities, and oceanographic institutes, regardless of nationalities.
6. Instructors in navigation and maritime safety, with the collaboration of the official entities in the field.
7. Speakers on law and maritime and fishing procedures, within the national legislative framework.

8. Biologists and aquaculture engineers responsible for the design and operation of the basic aquaculture unit.

#### PATRONAGE AND ORGANIZATION

##### Direct Patronage

The Center will be sponsored by several organizations.

1. Mexican Foundation for the Conservation of Billfish, C.A.
2. General Offices of Science and Technology of the Ocean.
3. Mexican Maritime Confederation, C.A.
4. Nautical Club of Cozumel

The sponsors have assigned the construction of the building which houses the Center as well as the basic items and installations to startup of the project as follows:

1. Nautical Club of Cozumel, the construction of a building and installations with a value of 150 million pesos (150,000 dollars) and the donation of various navigational and support equipment, worth 60 million pesos (40,000 dollars).
2. Mexican Maritime Confederation, C.A. and the Mexican Foundation for the Conservation of Billfish, A.C. will provide the initial financing fund, which will cover the pre-operative expenses of the Center of 16,000,000 Mex. Cy. (10,000.00 dollars). This initial economic assignment will give the Government Board of the Center sufficient time to recuperate it with its own efforts and to continue operating.
3. The General Offices of Science and Technology of the Ocean will provide the funding for the promotion, broadcasting, teaching, and research of the activities of the Center. They will probably also provide some type of office and support equipment.

##### Co-patrons: (indirect patronage)

The participation of co-patrons not directly associated with the project will be encouraged if said participants have the following objectives.

1. To acquire the materials necessary for the conditioning and victualling of the Center.
2. To construct and implement the basic aquaculture unit.
3. To arrange agreements for obtaining matching funds with national or foreign kindred institutions.

##### Collaboration organizations among co-patrons

1. Ministry of Public Education
2. National Board of Science and Technology (CONACYT)
3. Nautical Club of Cozumel
4. Universities and Institutes of Higher Learning



5. Center of Study and Research
6. Private and public, national and foreign institutions, foundations, and organizations
7. Other official entities

### **Trust**

The Trust will be made up by representatives of the following organizations:

1. The General Offices of Oceanic Science & Technology of Ministry of Public Education.
2. The Mexican Foundation for the Conservation of Billfish.
3. The Mexican Institute of Sport Fishing, C.A.
4. Nautical Club of Cozumel, Banco Playa, A.S. de V.C.
5. The Coordinating Boards of the Mexican Maritime Confederation, C.A., as follows:
  - of Conservation and Marine Ecology
  - of Tourist Aquatic-Recreational Activities.
  - of Private Tourist Fleets.
  - of Cooperative Tourist Fleets.

The Trust shall take the place of the Board of Directors and it shall be designated every three years by the Assembly of Patrons and Co-Patrons. This Trust shall be made up of seven members with the honorary titles of the patron and co-patron institutions, and its domicile shall be in Mexico City.

The Trust or Board of Directors may take advice from boards or committees specializing in the subject whether their expertise be technical, scientific, educational or administrative. For this purpose the following boards are designed in an enunciative but not a limitative way:

1. Professional/Teaching Formation
2. Scientific
3. Ecology - Conservation - Fishing Statistic
4. Public Relations and Governmental/Promotion Publicity
5. Administration

### **Executive Commission**

Every two years the Trust or the Board of Directors of the Center shall designate an executive Commission composed of a minimum of three members: a president, secretary, and treasurer. Furthermore, all the Commission members who feel it necessary and who by preference are the presidents of the specialized committees or boards can have their domicile in Mexico City. The executives and members may be reelected to their duties, but the executives shall not receive remuneration for the performance of their duties because said position shall be filled as an honorary title and cannot be a burden on the Center.

### **Government Board**

The Government board shall be designated annually by the Executive Commission and shall be represented by three members. Its domicile shall be established in Cozumel, Quintana Roo, and it shall be responsible for the administration and operation of the Center.

## **PROGRAMS OF TRAINING, RESEARCH AND PROFESSIONAL PRACTICES**

### **Importance of the Courses**

The study plan integrated in the research programs is meant to improve the academic, theoretic and practical knowledge of the participants. It is also intended to school them for the preparation of their thesis, as well as to design investigations, apply their new knowledge, formulate fishing grounds development projects and programs, perform laboratory work, and serve as auxiliaries in research programs.

On one hand, the goal is to assure that the subjects and teaching be compatible with similar programs of national and foreign universities or technological centers. On the other hand, it is our objective that this program be recognized as advanced enough to be registered at the SEP through the incorporation of the Center. To accomplish this goal the following programs must be implemented.

### **Methodology Of the Research**

1. Historic knowledge of the research.
2. Methods of investigation.
3. Scientific method.
4. Techniques of investigation.
5. Laboratory practices.
6. Field practices.

### **Basic Billfish Knowledge**

1. Age and growth.
2. The early life of the billfish.
3. Feeding habits and analysis of stomach content.
4. Reproduction.
5. Existing populations.
6. Economic impact and catches.
7. Conservation.
8. Integral utilization.
9. Contamination of the waters and its effect on the billfish.

This program is nourished, in principle, with all the global information that exists on billfish. Furthermore, the basic function of the Center will be to compile and reveal this information.

This information comes from the various research institutions and universities which, since the nineteenth century, have practiced related studies. Some of these institutions include; The Universities of Miami, Hawaii, Denmark, Spain, Italy, Mexico, Australia, New Zealand, as well as the Russian Division of Fisheries, Oceanographic Works in Japan, Taiwan Fisheries, Spanish Institute of Oceanography, International Commission for the Conservation of Atlantic Tunas, and U.S. National Marine Fisheries Service. The Center of Research for the Conservation of Billfish has already identified the areas which have been studied and will concentrate its efforts in those areas which remain to be studied and made known.

One of the areas of greatest interest is the impact of longline commercial fishing on these species. Additionally, the introduction of shark catching nets and equipment that also catch billfish species is also of great interest because this technique is also ravaging the resource.

For such a purpose, the Center of Research and Conservation of Billfish will have the direct counselling of various globally prestigious organizations related to the conservation of the resource.

In addition to full knowledge about these species, the object of this program includes acts of conservation and integral utilization. Due to the lack of knowledge of the private and official research institutions, pillaging of the resource is being encouraged that will ultimately result in scarce yields, and possible resource extinction.

#### **Conservation of the Billfish**

1. Open sea oceanic fishing grounds.
2. Vessels, equipment and fishing skills.
3. Commercial fishing of billfish.
4. Sport fishing of billfish.
5. Conservation standards and techniques.
6. Ecology and conservation.

#### **Marking and Surveying**

1. Performance of the supplies.
2. Migratory routes and cycles
3. Reproduction and spawning areas
4. Maturation and growth ages
5. Fertility and natural mortality and same by fishing.

### **Ocean Sport Fishing**

As a principal activity, the Center will train the youngsters in ocean sport fishing. This activity, among all marine recreations, is the one that gives the country the most economic inflow, and from which the largest number of persons benefit. Therefore, training in it becomes necessary and indispensable for maintaining and increasing the international prestige that sport fishing already enjoys in Mexico.

Taking into account the subjects corresponding to the study plan which the graduates followed, a program that is both practical and theoretical was prepared. This program is described and should be controlled by means of:

1. Registration of fishing compasses and regulation of data by season.
2. Revelation, by different means, of the activities of conservation of sport fishing.
3. Institution of the following practices, assisted by skills and methods of fishing:
  - expertise on sport fishing equipment (rods and reels), handling and maintenance.
  - expertise on all accessories of fishing equipment (buoys, floats, lines, weights, clips, leaders, etc.)
  - selection and preparation of baits: natural live (conservation in nurseries) and artificial lures (spoons, flies, feathers, tackle, etc.)
  - scientific expertise on marine species: habitat, and geographic distribution of the species.
  - feeding habits and reproductive functions.
  - scientific and common name of the species in various languages.
4. Specific techniques for recreational catch of the species:
  - fishing methods.
  - fishing equipment selection criteria
  - detection and localization methodology of fish or schools.
  - technical modifications to the vessels.
  - utilization aspects of the catches (smoked, filleted, salt-dried and packed).
5. Program procedure of marking and freeing the billfish.
6. Different commercial fishing skills knowledge:
  - trawling.
  - gill nets.
  - huachinango boxes.
  - lobster traps.
  - land lines.

### **Tourist and Fishing Navigation**

One of the main talents which should be developed and perfected by the seaman is the art of navigating, since it becomes a part of his life and means of support. For this reason, the Center will prepare the students in the following areas:

1. Nautical Astronomy:
  - apparent movement of the stars.
  - azimuthal and equatorial coordinates.
  - calculations of latitude and longitude.
2. Navigation by reckoning:
  - application of simple geometry:
  - handling of the log line.
  - fixed point markings.
3. Coastal navigation:
  - nautical charts.
  - position lines.
  - piloting.
4. Security and salvage:

During their stay at the Center, the youngsters will acquire the expertise to handle accidents related situations on the seas. They will also be prepared to observe and fulfill security standards both in the marinas and on board their vessels.

#### **5. Ocean booklet:**

Furthermore, this expertise will allow them to obtain the Ocean Booklet, a document issued by the Ministry of Communications and Transport. It gives instructions for driving a sport fishing vessel, or serving as a worker on any national or foreign vessel which obtains an exit dispatch in a Mexican port.

#### **6. Naval mechanics:**

With the collaboration of prestigious manufactures of large diesel marine engines and gasoline outboard motors, students will be given short courses and practice in the maintenance and repair techniques of this equipment.

### **Navigational Aids**

Instruction and Practice in the use of the following fishing and navigation electronic equipment common in the majority of sport vessels will also be provided.

1. Register of meteorological facsimile (radiofacsimile recorder, weather fax).
2. Fishfinder.
3. Loran C.
4. Autopilot.

5. Digital Radar.
6. Eco Sounder.
7. Computer Sonar.
8. Color Depth Sounder.
9. Satnav-Omega Transit.
10. S.S.B. Radio.
11. Thermo troll computer.
12. Marine VHM Radio-telephone.
13. Interpretation of satellite images.
14. Analysis of remote data by computer.

#### **Administration of Tourist Marinas, Port Services, and Vessel Consignments**

The administration of tourist marinas and knowledge about port services will strengthen the training of the youngsters in this complementary activity. The area of study for this program will be:

1. General basic administration.
2. Public relations.
3. Human relations.
4. Basic English and fishing-sport technique.

#### **Experimental Unit of Fish-breeding Habitats**

This unit will consist of 200 artifacts for the attraction of fish (FAD'S) that were sold to the Foundation (to be operated by the Center) by McIntosh Marine, of Fort Lauderdale, Fla., at a cost of 20 thousand dollars. This unit will be annually installed, utilized, conserved and withdrawn by each generation of students, under supervision of the manufacturer. Underwater activities and installation of an experimental unit for fish-breeding habitats:

1. Installation.
2. Maintenance.
3. Utilization.
4. Study of ciguatoxic fish in the zone.
5. Use of different materials.

#### **Aquaculture Unit**

The damming, accompanying the other installations of the Center, will permit the students to acquire practical knowledge in various sport fishing related activities as well as in the maintenance and rehabilitation of the marine reef environment. Furthermore, it will permit them to earn income for the Center from the sell of conserved live bait, and edible species of the reef's fauna which will be maintained fattening on the dam. The main activities will be:

1. Catching, maintenance and commercialization of the live bait.
2. Installation, experimentation and handling of artificial habitats of high density, for the maintenance of the edible species while being fattened.
3. Studying the maintenance in captivity of different local edible species.

Another benefit which this unit will contribute will be to provide a natural swimming pool for initial underwater training for the students at the Center.

#### **Economic Survey**

A survey will be carried out by conducting a poll to determine the economic outflow generated in the tourist zone of Quintana Roo by the activities of ocean sport fishing. It will be used as a model for other states in the country.

1. Historic study of sport fishing based on compasses, files and official registries.
2. Distribution and recuperation of questionnaires among fishing tourists.
3. Pool of activities by season of the sport fishing fleet.
4. Estimate of the affluence and catch of the visiting vessels.
5. Direct poll by questionnaire directed to the international airport, tourist jetties and hotels in the locality.
6. Poll among the lenders of services, on the collecting of revenues derived from sport fishing.
7. Integration and ordering of data form the polls by season.

#### **Seminar, Conferences, Round Tables**

In the advanced stage of the courses, a series of billfish related round tables, conferences and seminars will be offered by the professors, technicians and scientists, all of them specialists in research.

The Mexican Foundation for the Conservation of Billfish and the Offices of Science and Technology of the Ocean will favor visits to the Center from prestigious researchers, scientists and technicians. It is hoped that they will not only participate in the research and the results of the programs, but also hold conferences in their subjects, teaching the future professionals by making their participation in the research activities useful and well-directed. The visits of the scientists and technicians will be made, where possible, by an interchange of efforts, information, and participation in the knowledge of the results of the specific research programs which are put into practice by the Center.

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Mexico, D.F., October, 1987.

**MEXICAN FOUNDATION FOR THE PROTECTION OF BILLFISH,  
C.A.(Mexican Billfish Foundation).**

**PATRONS**

**Mexican Foundation for the Conservation of Billfish (Mexican Billfish  
Foundation)**

**-General Offices of Science and Technology of the Ocean, (SEPO)**

**-Mexican Maritime Confederation, C.A.**

**-Nautical Club of Cozumel**

**Co-Patrons: -Ministry of Public Education (S.E.P.)**

**-National Board of Science and Technology (CONACYT)**

**-Universities and Institutes of Higher Learning**

**-Research and Investigation Centers.**

**-Institutions, Foundations and Public and Private Organisms, National and  
Foreign.**

**Trust: - Representatives of the Following Institutions:**

**-Mexican Maritime Confederation, C.A.**

**-Mexican Foundation for the Conservation of billfish**

**-General Offices of Science and Technology of the Ocean**

**-Mexican Institute of Sport Fishing, C.A.**

**-Nautical Club of Cozumel, and Other Co-Patrons.**

**Government Board: A List of Representatives of:**

**-General Offices of Science and Technology of the Ocean**

**-Nautical Club of Cozumel Banco Playa, A.S.**

**-Mexican Maritime Confederation, C.A.**

**Mexico, D.F., October 1987.**